

EXHIBIT D

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA**

**IN RE: GENERIC PHARMACEUTICALS
PRICING ANTITRUST LITIGATION**

**MDL 2724
16-MD-2724**

THIS DOCUMENT RELATES TO:

HON. CYNTHIA M. RUFÉ

ALL ACTIONS

**PRETRIAL ORDER NO. 95
(ESI PROTOCOL)**

AND NOW, this 12th day of July 2019, upon consideration of the Report and Recommendation of the Special Discovery Master for ESI, to which no objections were filed, the prior rulings of the Court, and the agreement of the parties, the Court hereby enters the following protocol governing the identification and production of electronically stored information (“ESI”) and other documents.

1. DEFINITIONS

- 1.1 “Archival Storage” and “Archival Systems” mean long-term repositories for the storage of records that preserve the content of the Documents or data stored therein, prevent or track alterations to such Documents or data, and control access to electronic records.
- 1.2 “Archival Data” means information maintained for Archival Storage that is not immediately accessible to a user of a computer system.
- 1.3 “Backup Media” refers to magnetic tapes, CDS, DVDS, hard drives or other storage onto which Backup Systems store electronic information.

- 1.4 “Backup Systems” refers to computer systems used to store copies of electronic information on Backup Media to permit recovery of the information in the event of loss or damage to the original data.
- 1.5 “Agreed Custodian” shall mean any individual of a Producing Party as identified and agreed by the parties during a meet and confer as having possession, custody, or control of potentially relevant information, Documents, or ESI.
- 1.6 “Potential Custodian” shall mean any individual of a Producing Party that may have possession, custody, or control of potentially relevant information, Documents, or ESI.
- 1.7 “Custodial Data Source” means any data source used for business purposes in or on which an Agreed Custodian or Potential Custodian may store potentially relevant Documents, ESI or Hard Copy Documents, whether or not created or generated by an Agreed Custodian or Potential Custodian, including but not limited to personal computers, laptops, tablets, email (whether stored locally or centrally), mobile devices, shared network servers, shared or individual network folders, cloud storage systems, structured data systems, or social media.
- 1.8 “Document” shall have the meaning contemplated by Federal Rule of Civil Procedure 34(a)(1)(A).
- 1.9 “Document Family” means a collection of pages or files maintained together constituting a logical single communication of information, but consisting of more than a single stand-alone record. Examples include a fax cover, the faxed letter, and an attachment to the letter - the fax cover being the “Parent,” and the letter and

attachment being a “Child,” or an email and associated attachments, or a presentation with embedded files.

- 1.10 “Email” means an electronic means for communicating written information that is deliverable to designated recipients at specific addresses associated with particular Internet domains.
- 1.11 “ESI” is an abbreviation of “electronically stored information” and shall have the same meaning and scope as it has in Federal Rule of Civil Procedure 34(a)(1)(A).
- 1.12 “Extracted text” or “Full Text” means the text extracted from a Native Document, and includes all header, footer and document body information when available. A “Text File” is a file containing the full text of native files extracted directly from the native file, or, in the case of Hard Copy Documents or scanned PDF documents, subject to OCR, a file containing the text resulting from the OCR.
- 1.13 “Hard Copy Document” means a Document that was maintained in paper form.
- 1.14 “Load File” means an electronic file that is used to import all required production information into a Document database, including, if available, Document images, Full Text or OCR text, Native Format files where required by this ESI Protocol, and reasonably available Metadata, as well as information indicating Document breaks, and Document relationships such as those between an Email and its attachments. For files produced as TIFF images, each page of a Document shall be electronically saved as an image file. The Producing Party shall produce a unitization file, a type of load file, for all produced Documents in accordance with the specifications provided in Exhibit A.

- 1.15 “Metadata” means structured information about ESI that is created by the file system or application, embedded in the Document and sometimes modified through ordinary business use. Metadata of the ESI describes, inter alia, the characteristics, origins, usage and validity of the ESI.
- 1.16 “Native Format” means the format of ESI in the application in which such ESI was originally created.
- 1.17 “Network” or “Shared Storage Systems” shall mean any data storage device accessible to multiple users remotely over a computer network.
- 1.18 “Non-Custodial Data Source” means any data source that is not kept or maintained by any particular Agreed Custodian or Potential Custodian but which may contain potentially relevant Documents or ESI, including data sources used by any department, business unit, or division of a Producing Party, and Shared Storage Systems that may contain potentially relevant information, such as electronic mail systems, Backup Systems or Backup Media, or Archival Systems or Archival Storage.
- 1.19 “OCR” means the optical character recognition technology used to read paper Documents or electronic images of Documents and output such Documents to a searchable text format. The latter text is also referred to as the “OCR text” or simply “OCR.”
- 1.20 “Production” or “Produced” includes any exchange of Documents or ESI by a Producing Party, whether voluntarily or in response to a formal or informal request.

- 1.21 “Producing Party” means any party or third party that produces Documents pursuant to this ESI Protocol.
- 1.22 “Receiving Party” means any party or third party that receives information, Documents, or ESI produced in the MDL.
- 1.23 “Requesting Party” means any party to the MDL that requests production of information, Documents, or ESI in the MDL.
- 1.24 “Responsive Document” means any Document or ESI that a Producing Party produces in response to any discovery request or subpoena served in or in connection with the MDL, subject to the limitations set forth in the Federal Rules of Civil Procedure, the Local Rules, or Court order.
- 1.25 “Search Term” means a word or a combination of words or phrases designed to capture potentially relevant ESI, and includes strings of words and phrases joined by proximity and Boolean connectors or other syntax.
- 1.26 “Static Image” means or refers to a representation of ESI produced by converting a native file into a standard image format capable of being viewed and printed on standard computer systems.
- 1.27 “Tagged Image File Format” or “TIFF” refers to the CCITT Group IV graphic file format for storing bit-mapped images of ESI or Hard Copy Documents.
- 1.28 “TAR” (Technology-Assisted Review) means a process for prioritizing or coding a collection of ESI using a computerized system, using algorithms or systematic rules, that harnesses human judgments of subject matter expert(s) on a smaller set of Documents and then extrapolates those judgments to the remaining Documents in the collection. TAR systems generally incorporate statistical models and/or

sampling techniques to guide the process and to measure overall system effectiveness.

1.29 “Structured data” means data that resides in a fixed field within a record or file, or stored in a structured format, such as databases (such as Oracle, SQL, Access) or data sets, according to specific form and content rules as defined by each field of the database.

1.30 “Unstructured data” refers to free-form data which either does not have a data structure or has a data structure not easily readable by a computer without the use of a specific program designed to interpret the data, including but not limited to, word processing documents, slide presentations, email, PDFs, spreadsheets, and webpages, blogs, image files, instant messages, audio and video files, and others of similar variable format.

2. SCOPE

2.1 The procedures and protocols set forth in this ESI Protocol shall govern the search, disclosure, and format of Documents and ESI produced for use in the MDL to the extent available. This ESI Protocol does not define the scope of production, nor the relevance of any particular information. Nothing in this ESI Protocol establishes any agreement as to either the temporal or subject matter scope of discovery in the MDL. With respect to ESI, the inclusion of a data type as an example of a type of ESI in the Definitions herein should not be construed as an agreement by a Producing Party that these types of ESI may be potentially relevant and/or must be collected, searched, or produced. Similarly, the exclusion of a data type as an example of a type of ESI in the Definitions herein shall not be

construed as agreement by the Requesting Party that these types of ESI are not potentially relevant and/or need not be collected, searched, or produced. Further, the fact that a Document is captured by the application of a search protocol does not mean that such Document is responsive to any propounded discovery request or otherwise relevant to the MDL. Nothing in this stipulation is intended to alter any Producing Party, Receiving Party, or Requesting Party's rights, obligations, or responsibilities under Federal Rules of Civil Procedure 26(b)(2)(B), 34(a)(1), and 37. No provision of this ESI Protocol waives any objections as to the production, discoverability, admissibility, or confidentiality of Documents and ESI. The discovery requests, objections thereto, agreements between or among the Requesting Party, Receiving Party, and/or Producing Party, and any pertinent Court orders shall govern the scope of Documents and ESI to be produced.

- 2.2 Nothing in this Protocol is intended to be an exhaustive list of discovery obligations or rights of a Producing Party or a Requesting Party. To the extent additional obligations or rights not addressed in this Protocol arise under the Federal Rules of Civil Procedure, local rules, or applicable state and federal statutes, they shall be controlling. In particular, nothing in this ESI Protocol is meant to impose any obligations on any Producing Party to search, disclose or produce information protected under the Health Insurance Portability and Accountability Act of 1996 (Pub. L. 104–191, 110 Stat. 1936, enacted August 21, 1996) (“HIPAA”).
- 2.3 The Requesting Party, Receiving Party, and Producing Party, as appropriate, shall meet and confer in an effort to resolve any disputes that may arise under this ESI

Protocol, prior to seeking assistance from the Court or with an appointed discovery master.

3. **PRIOR PRODUCTIONS**

To the extent the Requesting Party has requested Productions of Documents or ESI that were previously collected and processed or produced by the Producing Party to the Plaintiff States, to the Department of Justice or in *In re Propranolol Antitrust Litig.*, Civil Action No.16-9901 (S.D.N.Y.), the Producing Party, subject to its objections to the request, may produce the previously-produced Documents in the same form in which they originally were produced or prepared for production, even if such form is different from the specifications in this ESI Protocol. To the extent Defendants choose to re-produce documents previously produced by Defendants to the Plaintiff States, the Defendants shall either (1) re-produce the documents using the same Bates numbers used when such documents were previously produced to the Plaintiff States or (2) provide an overlay to the Plaintiff States with the corresponding Bates numbers used when such documents were previously produced to the Plaintiff States. Unless the Court so orders, any such overlay shall not be shared with the Private Plaintiffs without the prior written consent of Defendants. To the extent a Producing Party chooses to re-produce documents previously produced by the Producing Party in *Propranolol*, the Producing Party shall either (1) re-produce the documents using the same Bates numbers used when such documents were previously produced in *Propranolol* or (2) the Producing Party shall provide an overlay with the corresponding Bates numbers used when such documents were previously produced in *Propranolol*. If the Court orders that any documents previously produced by Defendants to the Plaintiff States must be re-produced to the

Private Plaintiffs, the Producing Party shall re-produce such documents by either (1) re-producing the documents using the same Bates numbers used when such documents were previously produced to the Plaintiff States or (2) the Producing Party shall provide an overlay with the corresponding Bates numbers used when such documents were previously produced to the Plaintiff States.

4. **PRODUCTION FORMAT**

4.1 Format Guidelines: Other than as provided in Paragraphs 3 and 4, each Producing Party shall, to the extent reasonably and technically possible, produce Documents and ESI according to the specifications provided in Exhibit A. The Requesting Party, Receiving Party, and/or Producing Party, as appropriate, agree to meet and confer in good faith if any of the technological specifications set forth in Exhibit A result in technological issues.

4.2 De-Duplication: The Producing Party need only produce a single copy of a particular electronic Document.

- a) Vertical Deduplication. A Producing Party may de-duplicate ESI vertically by Agreed Custodian, provided however, that an email that includes content in the BCC or other blind copy field shall not be treated as a duplicate of an email that does not include content in the BCC or other blind copy field, even if all remaining content in the email is identical.
- b) Horizontal Deduplication. A Producing Party may de-duplicate ESI horizontally (globally) across the population of records, if the Producing Party discloses to the Receiving Party and the Requesting Party that it has deduplicated horizontally, and provided further that: (a) an email that

includes content in the BCC or other blind copy field shall not be treated as a duplicate of an email that does not include content in the BCC or other blind copy field, even if all remaining content in the email is identical; and

(b) all Agreed Custodians who were in possession of a de-duplicated Document, and the directory structure where the Agreed Custodian stored the de-duplicated Document, must be identified in the AllCustodian and CustodianOtherDirectory Metadata fields specified in Exhibit A.

To ensure accuracy, the All Custodian and CustodianOtherDirectory Metadata fields must be captured by an automated process and cannot be populated using a manual process. The aforementioned Metadata must be produced to the extent it exists. In the event of a rolling production of Documents or ESI items, the Producing Party shall provide an overlay load file with updated AllCustodian and CustodianOtherDirectory Metadata fields along with each production. The Metadata overlay may contain a full refresh of data for the AllCustodian and CustodianOtherDirectory Metadata fields or be a supplement to the information previously provided for the fields. At the time of production, the Producing Party shall identify the overlay as a full refresh or a supplement. A Metadata overlay file shall be either a full refresh overlay or a supplemental overlay.

- c) A Producing Party using a centralized system (or “journaling”) as a preservation and backup system for email may not possess certain Metadata, such as “CustodianOtherDirectory” and “Importance.” Where Documents are produced from such a centralized system, in the production

cover letter the Producing Party shall, to the extent practicable, identify the centralized system in the “Source” Metadata field for the Documents produced from such system, or identify by Bates Number which Documents are being produced from a centralized system.

- d) Methodology. If a Producing Party elects to de-duplicate, the Producing Party shall identify ESI duplicates by using industry standard MD5 or SHA-1 algorithms (or a reasonably equivalent alternative) to create and compare hash values for exact duplicates only. Other methodologies that are substantially different for identification of duplicates must be discussed with the Requesting Party and approved in writing before implementation. The resulting hash value for each item shall be reflected in the HASH Value field specified in Exhibit A.
- e) The Requesting Party and Producing Party hereby agree that production of Documents and ESI globally de-duplicated in accordance with the provisions of this ESI Protocol shall constitute production of Documents as maintained in the ordinary course of business. No Producing Party shall be required to, but may, eliminate duplicates by manual review, including Hard Copy Documents that are exact duplicates of electronic versions. Such documents could include copies of marketing materials printed and stored in boxes but never used, or conference programs printed but not distributed. However, any document containing handwritten notes or markings would not be considered a duplicate of an electronic version and if responsive must be produced as an original document. Likewise, printed-out electronic

documents not bearing markings but whose removal would undermine the completeness of a hard-copy file must be produced if responsive.

4.3 Email Thread Suppression: Email threads are email communications that contain prior or lesser-included email communications. A most inclusive email thread is one that contains all of the prior or lesser-included emails and attachments, including each branch of the email thread. A Producing Party may use e-mail thread suppression to exclude email from production, provided however, that an email that includes an attachment or content in the BCC or other blind copy field shall not be treated as a lesser-included version of an email that does not include the attachment or content, even if all remaining content in the email is identical. To the extent that a Producing Party uses e-mail thread suppression to exclude email from production, the Producing Party shall produce the metadata for that suppressed email.

4.4 Documents to Be Produced Natively: Except for Documents to which paragraph 4.9 applies, a Producing Party shall produce Microsoft Excel and other spreadsheet files, including comma or tab delimited text files, Microsoft Access files, and video or audio files in Native Format, if available. Other document types which may be difficult or costly to be accurately imaged, such as large Microsoft Power Point files, may be selected to be produced natively at the Producing Party's discretion. The production Load Files shall contain a link to the produced Native Format files as specified in the "NativeLink" Metadata field described in Exhibit A. Each electronic file produced in Native Format shall be assigned a unique Bates Number as set forth in Paragraph 5.6, and the database

record for that file shall include a single page TIFF image branded with this unique Bates Number, any confidentiality designation, and a standardized phrase indicating that the document was produced in native format (i.e., PRODUCED IN NATIVE FORMAT).

- 4.5 Unitization: In scanning Hard Copy Documents, distinct Documents shall not be merged into a single record, and single Documents shall not be split into multiple records. The Producing Party shall take reasonable steps to physically and logically unitize Hard Copy Documents. For example, Documents stored in a binder, folder, or similar container (each, a “container”) shall be produced in the same order as they appear in the container. Similarly, pages that are stapled or clipped shall be produced as a single document and not multiple one-page documents. The Producing Party shall undertake reasonable efforts to, or have its vendors, logically unitize (i.e. use cues such as consecutive numbering, report titles, similar headers and footers, and other logical cues that indicate the pages belong together) Hard Copy Documents that are not otherwise bound. The Producing Party shall make reasonable best efforts to unitize Hard Copy Documents correctly. This provision does not obligate any Producing Party to reassemble Document Families for Hard Copy Documents that are not stored or maintained as Document Families in the location in which members of that family are found or as they are kept in the ordinary course of business. Nor shall this provision obligate any Producing Party to make whole any Document that is not stored or maintained in its complete form.

- 4.6 Bates Numbers and Confidentiality Designations for TIFF Images: Each page of a Document produced in the MDL in TIFF file format shall have a legible numeric identifier (“Bates Number”) electronically “burned” onto the image that must: (1) be unique across all Document productions in this MDL; (2) maintain a constant length and format of nine numeric digits (with a consistent prefix and including 0-padding to the same number of characters) across the entire production; (3) be sequential within a given document; and (4) include a letter prefix identifying the Producing Party followed by a single-dash. The Bates Numbers shall be in a consistent font type and size. If a Bates number or set of Bates numbers is skipped in a production, the Producing Party will so note in a cover letter or production log accompanying the production. If warranted, consistent with the terms of any applicable protective order, each page of a Document shall have either “CONFIDENTIAL” or “HIGHLY CONFIDENTIAL” electronically “burned” onto the image. The Producing Party will make reasonable efforts to avoid obscuring any information originally appearing on the document and will reproduce any such document on request.
- 4.7 Metadata Fields and Processing: A Producing Party is not obligated to populate manually any of the fields in Exhibit A, with the exception of the following, which must always be populated for ESI: (a) BegBates, (b) EndBates, and (c) Custodian. To the extent the fields can be automatically populated at the time of production, Record Type, Production Volume and SourceParty shall be populated. Additionally, the Producing Party must populate the following fields in Exhibit A if applicable and reasonably and technically possible: (a) Confidentiality, (b)

PageCount, (c) AllCustodian (which is required if performing horizontal deduplication as allowed under Paragraph 5.2(b) of this ESI Protocol), (d) Redacted and (e) family designation fields sufficient to identify all members of a Document Family (e.g. BegAttach and EndAttach, or ParentBates and AttachBates, or AttachRange). To the extent reasonably available, Metadata identified in Exhibit A shall be provided in a Concordance-format delimited file with a .DAT file extension using Concordance default delimiters, including ASCII 020 and 254 delimiters for column break and text qualifier, and new line as ASCII 174. The first line shall be the header with field names, and each subsequent line shall contain the fielded data for each Document.

- 4.8 Production Media: The Producing Party shall produce Document images, Native Format files, Text and/or OCR files, Load Files, and Metadata on hard drives, CDs, DVDs, secure FTP, or other secure file transfer utility or other mutually agreeable media ("Production Media"). Production volumes may be produced via FTP or other electronic transfer system, without a separate agreement. Productions made via FTP or other electronic transfer are not required to be supplemented with hard media containing the same Documents. Each piece of hard media shall include a unique identifying label providing the identity of the Producing Party, the MDL number, the date of the production of Documents on the hard media, the disk number (1 of X, 2 of X, etc.) if applicable, Production Volume, and the Bates Number ranges of the Documents in the production. For productions delivered via a secure file transfer utility, the Producing Party shall provide a letter containing the information that would otherwise be on the label.

Each volume shall limit directory contents to approximately 5,000 files per folder. All productions shall be checked and produced free of computer viruses. To the extent that the Production Media includes any confidential information protected under any applicable protective order filed with the Court, the label on such Production Media shall indicate that the Production Media includes information so designated. Further, any replacement Production Media shall cross-reference the original Production Media, clearly identify that it is a replacement, and cross-reference the Bates Number range that is being replaced. All Production Media that is capable of write protection should be write-protected before production. All Production Media must be encrypted, with the Producing Party to provide a decryption key at the time of production.

- 4.9 Redacted Documents: In the event that a Document is redacted, as allowed under Paragraph 13 of this ESI Protocol, the full text may be replaced with OCR text that excludes the redacted material, Metadata fields may be redacted if they contain redactable information, and the Native Format version need not be produced. When a Document is redacted, the TIFF image should show the word “redacted” where applicable and a production Load File field should be populated to indicate the Document contains a redaction. If a Document to be produced in Native Format requires redaction, that Document may be produced in redacted TIFF format, or in redacted Native Format, at the Producing Party’s discretion, and to the extent reasonably and technically possible.
- Should a Producing Party believe that redacting a file is overly burdensome, the Producing Party, may request a meet and confer to determine if an alternative

means of production would be appropriate, such as creating a new native document which contains the tab and heading structure of the original file with only the excerpted responsive data (“Extracted Document”), along with a brief explanation of what has been excluded. If the Parties are unable to agree after meeting and conferring in good faith, the Parties may notify the Court or an appointed discovery master of their unresolved dispute(s) and seek resolution by the Court or an appointed discovery master. If the Parties agree and the Producing Party creates such an Extracted Document, it shall so indicate in the metadata that the Extracted Document is an extract. The Receiving Party may request that any such Extracted Document be produced in its original form with redactions and the parties shall meet and confer concerning any such request. If redacting TIFF images, the Producing Party, or its ediscovery vendor, shall make reasonable efforts to: (1) reveal hidden rows, columns or sheets prior to converting the Document to TIFF; (2) clear any filters that may conceal information; (3) adjust column widths so that numbers do not appear as “#####”; (4) ensure that column and row headings print; (5) ensure that the tab name appears in the header or footer of the document; (6) process comments so that they are produced at the end of the spreadsheet; (7) process spreadsheets so that they print across then down; and (8) process presentation Documents (e.g., PowerPoints) so that all speaker notes and comments are visible. If a Requesting Party or Receiving Party receives a redacted TIFF image of a Document required herein to be produced in Native Format that the Requesting Party or Receiving Party does not believe is formatted so as to be legible (e.g., column cells display

“#####” instead of the value) or if a Requesting Party or Receiving Party wants additional information from an Excel-type spreadsheet (e.g., formulas), the Requesting Party or Receiving Party may request from the Producing Party a legible TIFF image or a redacted native item. At that time the Requesting Party or Receiving Party will explain a reasonable basis for its request and will provide a specific Bates Number range for the ESI at issue. Upon receiving such a request, the Producing Party shall either produce a legible TIFF image, or redacted native item or disclose to the Requesting Party or Receiving Party why it is unreasonable or unnecessary to do so. If the Producing Party encounters Microsoft Access files or audio or video files or other file types requiring native production that contains privileged content, the Requesting Party, Receiving Party, and Producing Party, as appropriate, shall meet and confer to determine a suitable manner of producing the non-privileged, responsive content contained in these files.

- 4.10 Attachments: Email attachments and embedded files must be mapped to their parent Document by the Bates Number by including a “BegAttach” field designating the beginning of each such attachment and “EndAttach” field designating the end of each such attachment. If attachments and embedded files cannot be separated from their parent Documents, then “BegAttach” and “EndAttach” fields listing the unique beginning and end number for each attachment or embedded Document must be included. Non-substantive automatically-generated embedded files, such as logos, embedded, non-substantive formatting files such as .ole or .dll formats, or confidentiality legends

need not be produced as separate attachments. To the extent they are maintained together, all Documents in a Document Family shall be consecutively Bates Number stamped with the child Documents produced immediately after the parent-document.

4.11 Text Files: Each Document produced under this ESI Protocol shall be accompanied by a single, multipage text file containing all of the text for that Document (as opposed to one text file per page of such Document). Each text file shall be named using the Bates Number of the first page of the corresponding production item.

- a) ESI: The text of each ESI item shall be extracted directly from the ESI native file. To the extent that is not technically possible (e.g., the underlying native file is an image file), the text for each ESI item shall be generated by applying OCR to the native file under the provision above. For contacts and calendars, user modifiable fields shall be extracted and produced as text.
- b) OCR: To the extent that Documents have been run through OCR software, the full text shall be provided on a document-level basis in an appropriately formatted text file (.txt) that is named to match the first Bates Number of the document. Text files shall be provided in a "Text" folder. To the extent that a Document is redacted as allowed under Paragraph 13, the text files shall not contain the text of the redacted portions, but shall indicate where the redactions were made, e.g. with the

notation “REDACTED.” There is no obligation to OCR any electronic Documents that do not natively exist in a text-searchable format.

- 4.12 Password Protected Files: The Producing Party shall make reasonable efforts to ensure that all encrypted or password-protected Documents are successfully processed for review and production under the requirements of this ESI Protocol, and the decrypted Document is produced. To the extent encrypted or password-protected Documents are successfully processed according to the requirements of this ESI Protocol, the Producing Party has no duty to identify the prior encrypted status of such Documents. To the extent such Documents are not successfully processed, the Producing Party agrees to: (a) produce a slipsheet for each encrypted or password protected Document that cannot be successfully processed indicating that the Document cannot be decrypted; and (b) provide the metadata for the Document required by Exhibit A to the extent it can be reasonably extracted from the file in its encrypted form. Notwithstanding the preceding sentence, a Producing Party need not produce a slipsheet or provide metadata for encrypted attachments in otherwise non-responsive Document Families that are encrypted, but do not appear reasonably likely to contain responsive material. The Requesting Party, Receiving Party, and/or Producing Party, as appropriate, shall meet and confer regarding any requests that a Producing Party undertake additional efforts to decrypt files after production. If the Parties are unable to agree after meeting and conferring in good faith, the Parties shall notify the Court or an appointed discovery master of their unresolved dispute(s) and seek resolution by the Court or an appointed discovery master.

- 4.13 Embedded Documents: Embedded ESI documents (e.g. a spread sheet embedded within a word processing document) will be extracted, produced as an independent Document, and related back to the respective top-level parent document (e.g., standalone file, email message, tec.) via the BegAttach and EndAttach fields referenced in Exhibit A. Related embedded documents will be produced within a continuous Bates Range.
- 4.14 Compressed and Container Files: Compression file types (e.g., .CAB, .GZ, .RAR, .ZIP), shall be decompressed to ensure that a compressed file within a compressed file are decompressed into the lowest possible compression resulting in individual folders and/or files. Original compression files and container files need not be produced, provided the responsive content files are produced in accordance with the specifications of this ESI Protocol.
- 4.15 Custodian or Originating Source: The custodian or originating source shall be identified in the Custodian field of the database load files, as provided in Exhibit A. Documents found in the possession of a natural person (or on a natural person's hardware or storage media) shall be produced in such fashion as to identify the natural person. Documents found in the possession of a department, group, entity, or other common facility (e.g., office, file room, archive, network storage, file share, back-up, hard drive, etc.) shall be produced in such a fashion as to identify the department, group, entity, or facility. A Producing Party shall use a uniform description of a particular Agreed Custodian across productions.
5. **ENTERPRISE LEVEL DATABASES:** Where a discovery request requires production of Structured Data, in lieu of producing the native database or TIFF images of database

content, the Producing Party shall identify such Structured Data sources within a reasonable period after receiving the discovery request, and the Requesting Party and Producing Party, as appropriate, shall meet and confer on the content and format of a data extraction from such Structured Data Source. The Requesting Party and Producing Party, as appropriate, shall, in good faith, make disclosures necessary to ensure the meet and confer discussions regarding content and format of the production are meaningful.

6. **PROCESSING SPECIFICATIONS:** The Producing Party shall collect and process Documents using reasonable methods that preserve available data. To the extent reasonably feasible upon collection, the Producing Party shall use the following specifications when converting ESI from its Native Format into TIFF image files prior to production:

- (a) All tracked changes shall be maintained as last saved, to the extent reasonably feasible upon collection, so that all changes to a Document are evident, unless redactions were necessary to remove privileged material.
- (b) All Word Documents shall include and show field codes for auto-date and auto-time fields.
- (c) Author comments shall remain or be made visible, unless redactions were necessary.
- (d) Presenter notes within a presentation shall be made visible, to the extent reasonably feasible upon collection and unless redactions were necessary.
- (e) ESI shall be processed with a single time zone and date and time setting that is consistent across each Producing Party's productions ("Chosen Time Zone"). If a time zone other than UTC/GMT time zone is used for the Chosen Time Zone, a

Producing Party shall notify the Requesting Party in the cover letter accompanying each production. The date and time reflected in the fields in Exhibit A, and on any TIFF image will include the Chosen Time Zone. TIFF images may optionally show the local date and time if they display the offset to the Chosen Time Zone.

- (f) To the extent technically feasible, ESI items shall be processed in a manner that maintains and displays all hidden columns or rows, hidden text or worksheets, speaker notes, tracked changes and comments (i.e., shall force on hidden columns or rows, hidden work sheets, track changes, can comments). If the file ordinarily to be produced as a TIFF under this ESI Protocol that cannot be expanded, the Receiving Party may request that the native be produced with the image file.
- (g) ESI items shall be processed so as to maintain the date/time shown in the Document as it was last saved by the custodian or end user, not the date of collection or processing (i.e., shall force off Auto Data).
- (h) If a Document otherwise subject to production in TIFF under this ESI Protocol cannot be converted to TIFF without error due to corruption or some other issue that renders the Document unreviewable, password protection, or some other issue, the Document shall be produced in Native format consistent with paragraph 4.4 of this ESI Protocol.
- (i) English Language: If no English version of a Document is available, the Producing Party has no obligation to produce an English translation of that Document and does not have an obligation to render that Document text searchable via OCR or other means. The Producing Party shall make reasonable

efforts to ensure that all technologies and processes used to collect, process and produce the text of any Document – including all TIFF conversion and OCR processes, and the extraction of text from native files – preserves all foreign language text, punctuation and other characteristics as they exist in the source native file. To the extent reasonably and technically possible, foreign language text files shall be delivered in UTF-8 and be Unicode compliant, with the correct encoding to enable the preservation of the Documents’ original language.

7. DISCLOSURES REGARDING CUSTODIANS AND SOURCES OF ESI

7.1 Process for determination of Agreed Custodians

- a) Prior to a meet and confer between the Parties to discuss appropriate custodians, the Producing Party shall disclose the Potential Custodians it proposes to be used as Agreed Custodians and for each such Potential Custodian his/her name, and title(s). In addition, to the extent reasonably available, the Parties shall provide specific years of service.
- b) The Requesting Party may dispute the designations in 7.1(a) or request reasonable additional information that may be needed to evaluate the sufficiency of the Producing Party’s list of proposed Agreed Custodians.
- c) If the parties are unable to resolve their disputes after good faith negotiations, the Requesting Party seeking to add to the list of proposed Agreed Custodians provided by the Producing Party shall promptly file a motion with the Court or an appointed discovery master to seek its appropriate ruling. Notwithstanding the foregoing, any party may petition the Court or an appointed discovery master, at any time and upon a

showing of good cause, to add names to the list of Custodians provided by the Producing Party.

7.2 Disclosure of Sources of Potentially Relevant Documents and ESI.

- a) Following the determination of Agreed Custodians, the parties shall meet and confer concerning the appropriate Custodial Data Sources for the Agreed Custodians.
- b) Prior to such a meet and confer between the Parties to discuss appropriate Custodial Data Sources for the Agreed Custodians the Producing Party will disclose and identify the Custodial Data Sources, including structured and unstructured data, along with general information about the data source (such as dates of service, nature, scope, character, organization, and formats employed in each system).
- c) Prior to a meet and confer between the Parties to discuss appropriate Non-Custodial Data Sources, the Producing Party will disclose and identify the Non-Custodial Data Sources, including structured and unstructured data, along with general information about the data source (such as dates of service, nature, scope, character, organization, and formats employed in each system).
- d) For any Custodial or Non-Custodial Sources identified in response to the disclosures identified in response to Section 7.2(b) and 7.2(c) that a Producing Party contends is not reasonably accessible, the Producing Party shall identify why the information is considered not reasonably accessible, and the general nature of such software, systems, or

information. If the Requesting Party intends to seek discovery that the Producing Party contends is not reasonably accessible, the Parties shall promptly meet and confer in good faith, and if necessary, seek resolution by the Court or an appointed discovery master.

8. DESIGNATED LIAISON

8.1 Each Requesting Party, Receiving Party, and Producing Party shall designate individual(s) to act as e-discovery liaison(s) for purposes of meeting, conferring, and attending court hearings on the subject (“Designated ESI Liaison”). The Designated ESI Liaison shall:

- a) be prepared to participate in e-discovery discussions and dispute resolution;
- b) be knowledgeable about his or her respective Requesting Party’s, Receiving Party’s, or Producing Party’s e-discovery efforts;
- c) be, or have reasonable access to those who are, familiar with his or her respective Requesting Party’s, Receiving Party’s, or Producing Party’s electronic systems and capabilities in order to explain those systems and answer relevant questions; and
- d) be, or have reasonable access to those who are, knowledgeable about the technical aspects of e-discovery, including electronic Document storage, organization, and format issues, and relevant information retrieval technology, including search methodology.

9. SEARCH METHODOLOGIES FOR UNSTRUCTURED DATA

9.1 In General:

- a) Prior to conducting a search for responsive ESI, regardless of the search methodologies to be employed, the Requesting Party and Producing Party shall meet and confer regarding the search methodologies the Producing Party proposes to employ to identify responsive Documents, and make such disclosures regarding their proposed search methodology that will permit the Receiving Party to evaluate the proposed methodology and enable meaningful meet and confers, such as the type of methodology to be used (e.g., Search Terms, TAR or other advanced analytics, e-mail thread suppression, manual review, etc.) and the Custodial Data Sources and Non-Custodial Data Sources to which they will be applied, along with information sufficient for the Requesting Party to evaluate the reasonableness of the Agreed Custodians whose Documents are to be searched, and the Custodial Data Sources and Non-Custodial Data Sources to be searched. In addition, the Producing Party shall disclose whether it intends to fulfill its obligation to produce responsive documents and ESI by either: (i) Producing all non-privileged documents and ESI that meet specified, disclosed search criteria, or (ii) Subjecting documents and ESI that meet specified disclosed search criteria to a responsiveness review in addition to the application of search methodologies.
- b) Any search methodology used by a Producing Party to search for responsive Documents will search any associated attachments and embedded files.

9.2 To the extent a Producing Party elects to use search terms and/or Boolean search strings (together, “Search Terms”) or other limiters, including, by way of example only, date ranges and email domains in Metadata fields, as a means of limiting the volume of information to be reviewed for responsiveness, prior to conducting any such searches or applying other limiters, that Producing Party shall disclose the following to the Requesting Party.

- a) The Agreed Custodians whose ESI will be searched using Search Terms, and a description of the Custodial Data Sources and Non-Custodial Data Sources against which the limiters and/or Search Terms shall be run; and
- b) An initial list of the limiters and/or Search Terms the Producing Party intends to use.

9.3 Upon receipt of the proposed Search Terms and disclosures set forth above, the Requesting Party and Producing Party shall meet and confer to attempt to reach agreement on the Search Terms and/or limiters to be used to identify responsive Documents. To facilitate such meet and confers, the Producing Party shall discuss, among other matters, and to the extent not protected by the attorney-client privilege or work-product doctrine, whether the terms include relevant terminology, or nicknames, code words, euphemisms, acronyms, slang, terms of art, email addresses, and other language likely to be contained in responsive documents; appropriate synonyms for proposed Search Terms and variations on search syntax, for example, using wildcard characters, truncation, stem words, fuzzy logic and proximity terms to address over and under inclusiveness; and whether any appropriate testing and quality control measures were conducted or

will be conducted to evaluate the sufficiency of the Search Terms. The Requesting Party and Producing Party hereby agree that negotiations regarding Search Terms and other limiters are intended to be a cooperative and iterative process, involving a good faith exchange of information and proposals to facilitate the negotiations.

- 9.4 Technology Assisted Review (“TAR”) and Similar Advanced Analytics: If a Producing Party elects to use TAR or similar advanced analytics as a means of including or excluding Documents to be reviewed for responsiveness or of culling or otherwise limiting the volume of information to be reviewed for responsiveness, prior to use of such tool the Requesting Party and Producing Party shall meet and confer as to (1) the Custodial Data Sources and Non-Custodial Data Sources against which TAR will be run; (2) the TAR or advanced analytics vendor and methodology being deployed; (3) the quality control measures used to validate the results of the TAR methodology or similar advanced analytics, (4) any Documents, Document types, file types or other categories that the Producing Party proposes to exclude from the TAR process and the method of identifying such Documents to be excluded, (5) other disclosures that are reasonably necessary for the Requesting Party to evaluate the proposed TAR process. To the extent a Producing Party proposes to use Search Terms to pre-cull ESI prior to application of TAR and/or advanced analytics, prior to doing so, they shall meet-and-confer with the Requesting Party regarding whether pre-culling is appropriate and if so, how it is to be applied. If the Requesting Party and Producing Party are unable to agree on the TAR and/or

advanced analytics technology and methods being proposed after meeting and conferring in good faith, the Requesting Party and Producing Party shall notify the Court or an appointed discovery master of their unresolved dispute(s) and seek resolution by the Court or an appointed discovery master.

10. AMENDMENT OF ORDER

- 10.1 Nothing herein shall preclude any Requesting Party, Receiving Party, or Producing Party from seeking to amend this ESI Protocol in writing, provided, however, that no Requesting Party, Receiving Party, and/or Producing Party may seek relief from the Court or an appointed discovery master concerning compliance with the ESI Protocol until that Requesting Party, Receiving Party, and/or Producing Party has met and conferred in good faith with the other Requesting Party, Receiving Party, and/or Producing Party involved in the dispute.
- 10.2 Any Requesting Party, Receiving Party, or Producing Party added or joined to this MDL after the date of this ESI Protocol that seeks to deviate from this ESI Protocol must obtain leave of Court or an appointed discovery master to do so unless every affected Requesting Party, Receiving Party, and Producing Party consent to the proposed deviation in writing. Before seeking Court or appointed discovery master intervention, every affected Requesting Party, Receiving Party, and Producing Party shall meet and confer in good faith regarding any modification.
- 10.3 In light of the disparate data systems and architectures employed by various entities, variations from this ESI Protocol may be required. In the event that any

Requesting Party, Receiving Party, or Producing Party identifies a circumstance where application of this ESI Protocol is not technologically possible, would be unduly burdensome or impractical, or when another process would satisfy the objective and reach the same result with less burden, the Requesting Party, Receiving Party, or Producing Party will notify the affected Requesting Party, Receiving Party, or Producing Party of the exception and before implementing an alternative, specify an alternative procedure that is not unduly burdensome or impractical that will be employed, if one exists. Upon request by any affected Requesting Party, Receiving Party, or Producing Party, those affected Requesting Parties, Receiving Parties, and/or Producing Parties will meet and confer regarding the circumstances and proposed alternative approaches.

10.4 Nothing in this ESI Protocol waives the right of any Producing Party to petition the Court or an appointed discovery master for an Order modifying the terms of this ESI Protocol upon sufficient demonstration that compliance with such terms is either (1) unexpectedly or unreasonably burdensome, or (2) impossible, provided, however, that counsel for such Producing Party must first meet and confer with counsel for the Requesting Party, and the Requesting Party and Producing Party shall use reasonable best efforts to negotiate an exception from or modification to this ESI Protocol prior to seeking relief from the Court or an appointed discovery master.

11. **ASSERTIONS OF PRIVILEGE.** Pursuant to Rule 26(b)(5) of the Federal Rules of Civil Procedure, the Requesting Party, Receiving Party, and Producing Party hereby agree that a Producing Party may withhold or redact a Document if the Document

withheld is protected by attorney-client privilege, the work-product doctrine, or any other applicable privilege or immunity from disclosure.

11.1 If a Producing Party identifies portions of a Document and redacts such portions of the Document pursuant to Paragraph 12 of this ESI Protocol, the Producing Party must log the fact of redaction except if such redactions are solely to protect “sensitive personally identifying information” or “SPII.”

11.2 Privilege Logs: Privilege logs shall be provided in Excel format and contain the following information for each responsive Document or ESI withheld or redacted:

- a) a sequential number associated with each privilege log record;
- b) the date of the Document or ESI;
- c) the Bates Numbers of Documents or ESI redacted or a numerical or other identifier for each Document or ESI withheld;
- d) the identity of persons who sent (and, if different, the identity of all persons who authored or signed) the Document or ESI and the addressees, recipients, copyees, and blind copyees (with senders, signers, authors, addressees/recipients, copyees, and blind copyees, each separately identified by those categories), and identification of which of them are attorneys, and the job title or general description of the job responsibilities of such persons, if known or reasonably knowable. The identification of job titles or responsibilities of such persons may be satisfied by providing a key accompanying the log that provides the job title or general job responsibilities for such persons and by identifying those persons whose title or responsibilities are unknown rather than by entering such titles or

descriptions in the log itself, or by providing organizational charts or similar documents sufficiently detailed for the Requesting Party to readily identify the job titles or responsibilities of such persons.¹ In the event a Producing Party reasonably believes compliance with the foregoing requirement to provide job titles or general job descriptions will be unduly burdensome, it shall request a meet and confer with the Requesting Party and the parties shall meet and confer and, if they cannot resolve the matter, bring it to the Court or an appointed discovery master for resolution.

- e) a description of the subject matter of the information contained in the Document or ESI that, without revealing information itself privileged or protected, is sufficient to understand the subject matter of the Document and the basis of the claim of privilege or immunity. The same description may be used for multiple Documents (i.e., a categorical description) so long as the Producing Party has, in good faith, evaluated the Document to ensure the categorical description accurately reflects the contents of the Document and is sufficient for the Receiving Party to evaluate the claim of privilege or immunity;
- f) the type or nature of the privilege asserted (i.e., attorney-client privilege or work product doctrine, and if such other privilege or immunity is asserted it shall be separately identified along with identification of whether the

¹ Nothing in Paragraph 13.2(d) shall obligate a Producing Party to conduct unreasonable independent research regarding the identity of any such persons. If the Producing Party is unable to identify the job title or provide a general description of such persons, it shall disclose that inability in the log or any accompanying key providing job titles and/or general job descriptions.

Producing Party or some other entity holds the privilege or protection asserted); and

g) an indication of whether the Document or ESI has been redacted and produced or withheld in its entirety.

11.3 For email threads, the Producing Party shall log an entry for each lesser-included email in the thread, or the Producing Party shall log a single entry for the entire thread and produce a redacted version of the threaded email.

11.4 For ESI, as an alternative to manually entering the information required under Paragraph 12.2 (a)-(d) of this ESI Protocol, a portion of each Producing Party's privilege log may be generated by exporting objective Metadata from the review tool used to identify privileged or work-product protected Documents where the objective Metadata provides the information required under those subparagraphs, provided, however, that: the Metadata are reasonably understandable and legible; the requirement to provide a key or other documents sufficient to identify the job titles or job responsibilities of the persons identified in the metadata is satisfied or a meet and confer on that issue is requested, as provided under Paragraph 12.2(d); for email senders or recipients for which the Metadata reveals only an email address rather than an individual's name, the Producing Party shall provide a "key" that identifies the individuals associated with such email addresses and identify any email addresses for which the associated individual is unknown; and that for email, email and any attachments are sequentially logged.

a) Such Metadata shall include the following:

1. A unique privilege log identifier or, in the case of redacted documents, the Bates number assigned to such document;
2. Author
3. From
4. To
5. CC
6. BCC
7. Date Sent, Received or Created
8. Document Type, (for example MSG (message), ATT (attachment), DOC (loose file)
9. Page Count or File Size

11.5 The Producing Party shall produce a key showing the job title(s) for all attorneys identified on that Producing Party's privilege log.

11.6 Should a Receiving Party be unable to ascertain whether or not a Document contained on the log is privileged or have reason to believe a particular entry on the log is responsive and does not reflect privileged information, the Receiving Party may request a meet and confer, and the Requesting Party, Receiving Party, and/or Producing Party, as appropriate, shall, meet and confer about such deficiencies. The Producing Party shall provide additional information necessary for the Receiving Party to determine if the Document has been properly withheld or redacted. If the Requesting Party, Receiving Party, and/or Producing Party, as appropriate, cannot agree on the provision of such additional information, the

Receiving Party will promptly move the Court or an appointed discovery master for resolution.

11.7 Privilege logs shall be produced within a reasonable time following production of the first production volume and shall be supplemented within a reasonable time following each subsequent production where production occurs on a rolling basis, or by another date upon agreement of the Requesting Party and the Producing Party. The Requesting Party, Receiving Party, and/or Producing Party, as appropriate, shall meet and confer to reach agreement regarding what constitutes such reasonable time for that privilege log production.

11.8 Documents Presumptively Excluded from the Privilege Logs.

- a) Any documents or communications sent solely between and among counsel for the Plaintiff States or state governmental agencies (including the State Attorneys General²), or persons employed by or acting on behalf of such counsel.
- b) Communications, after July 15, 2014, exclusively between a Producing Party (either defendant or plaintiff) and its outside litigation counsel (or in the case of states, litigation counsel), primarily about this MDL, the Private Actions, or the State Actions (all as defined by PTO 45), or the state investigation of the generic pharmaceuticals industry, or the criminal investigation that the Antitrust Division of the U.S. Department of Justice is conducting into the generic pharmaceuticals industry.

² Wyoming and Rhode Island are included as “Plaintiff States” for the purposes of this provision provided they join this MDL.

- c) Work product created for this MDL, the Private Actions, or the State Actions (all as defined by PTO 45), or the state investigation of the generic pharmaceuticals industry, or the criminal investigation that the Antitrust Division of the U.S. Department of Justice is conducting into the generic pharmaceuticals industry by outside litigation counsel (or in the case of states, litigation counsel), or by an agent of outside litigation counsel for a party, other than a party to the MDL, after March 2, 2016.
- d) Work product prepared after March 2, 2016, by a party or its inside counsel at the direction or request of the party's outside litigation counsel (or in the case of states, litigation counsel) for purposes of assisting such outside counsel's prosecution or defense of this MDL, the Private Actions, or the State Actions (all as defined by PTO 45), or the state investigation of the generic pharmaceuticals industry, or the criminal investigation that the Antitrust Division of the U.S. Department of Justice is conducting into the generic pharmaceuticals industry.
- e) Communications regarding this MDL, the Private Actions, or the State Actions (as defined by Pre Trial Order 45) (i) sent solely between litigation counsel for the Parties, and or (ii) sent solely between litigation counsel for the Parties and persons employed by or acting on behalf of such counsel.

11.9 In the interest of time, and to minimize litigation costs, the Requesting Party and Producing Party may in good faith negotiate the exclusion of categories, in addition to those identified in Paragraph 11.7 herein, of Documents that while

technically responsive are relatively irrelevant to the issues in the litigation and likely to be privileged or protected by the work-production doctrine.

12. **PROPER BASIS FOR REDACTIONS AND WITHHOLDING OF DOCUMENTS**

Redaction or Withholding of Responsive Documents. Pursuant to Rule 26(b)(5)(A), a party may redact or withhold responsive documents only on grounds of (1) attorney-client privilege; and (2) protection under the work-product doctrine. If any member of a Document Family is responsive, the Producing Party shall produce all family members and/or portions thereof that are not independently protected as privileged or work-product. Additionally, because of the risk of irreparable harm to individuals, such as identity theft: (1) an otherwise responsive document that contains personal medical or health records not relevant to this litigation or protected by HIPAA, personal credit card or personal bank account numbers, social security numbers, or tax identification numbers of individual Plaintiffs, individual employees or agents of the Parties, or individuals not a Party to this litigation (together, “sensitive personally identifying information” or “SPII”) may be redacted to exclude SPII; (2) a document that is a member of a family that includes one or more responsive documents may be withheld if it contains exclusively SPII.

To the extent documents are redacted or withheld on the above grounds, the redaction legends or placeholder document for a withheld family member should indicate the reason for the redaction as follows: 1) REDACTED – PRIVILEGED or WITHHELD - PRIVILEGED; 2) REDACTED – WORK PRODUCT or

WITHHELD –WORK PRODUCT; or (3) REDACTED – SPII or WITHHELD – SPII.

If a Producing Party, for any reason, subsequently produces a Document/ESI withheld and place-holdered or redacted pursuant to this ESI Protocol, the Producing Party shall produce that Document pursuant to the production format specifications of this Order that would have been applicable to the Document had it been produced initially (including provision of applicable load files necessary to link the replacement file to other previously produced document family members), except that the Producing Party shall apply an appropriate numerical suffix to the Bates number of the file to account for instances where the produced version of the file occupies more pages than the original placeholder image for the file. If the Producing Party's production software does not support the required numerical suffix, the Producing Party may, at the time of the production of the withheld Document/ESI, produce such Document/ESI with a new Bates number so long as a cross reference chart from the original Bates number to the new Bates numbers is provided in Excel format. As an example, if a Producing Party initially withholds a five-page Word document as non-responsive and provides a placeholder image branded with the number ABC-000000001, the subsequently produced version of that five-page Word document shall be branded ABC-000000001.001 through ABC-000000001.005.

It is so **ORDERED**.

BY THE COURT:
/s/ Cynthia M. Rufe

CYNTHIA M. RUFÉ, J.

EXHIBIT A

1. COVER LETTER

A cover letter shall be included with each production and shall include information sufficient to identify all accompanying media (hard drive, thumb drive, DVD, CD, secure FTP), shall identify each production on such media by assigning a Production Volume name or number, and shall include the Bates range for the Documents produced in each volume.

2. PRODUCTION LOAD FILES

There will be two Load/Unitization files accompanying all Productions of ESI.

The first will be a Metadata import file, in Concordance-format delimited file with a .DAT file extension, that contains the agreed upon Metadata fields in UTF-8 encoding.

- The second will be a cross-reference file that contains the corresponding image information identifying document breaks. The acceptable formats for the cross-reference files are .log and .opt.
- **Image Load Files**
 1. The name of the image load file shall mirror the name of the delivery volume, and shall have the appropriate extension (e.g., ABC001.OPT).
 2. The volume names shall be consecutive (e.g., ABC001, ABC002, *et seq.*).
 3. There shall be one row in the load file for every TIFF image in the Production.
 4. Every image in the delivery volume shall be cross-referenced in the image load file.
 5. The imageID key shall be named the same as the Bates Number of the page.
 6. Load files shall not span across media (e.g., CDs, DVDs, hard drives, etc.), *i.e.*, a separate volume shall be created for each piece of media delivered.
 7. Files that are the first page of a logical Document shall include a “Y” where appropriate. Subsequent pages of all Documents (regular Document, Email, or attachment) shall include a blank in the appropriate position.
- **Concordance Data Load Files:**
 1. Data load files shall be produced in Concordance .DAT format.
 2. The data load file shall use standard Concordance delimiters:
 3. Comma - ¶ (ASCII 20);

4. Quote - ¨ (ASCII 254);
5. Newline - ® (ASCII 174).
6. The first line of the .DAT file shall contain the field names arranged in the same order as the data is arranged in subsequent lines.
7. All date fields shall be produced in mm/dd/yyyy format.
8. All attachments shall sequentially follow the parent document/email.
9. Use carriage-return to indicate the start of the next record.
10. Load files shall not span across media (e.g., CDs, DVDs, hard drives, etc.); a separate volume shall be created for each piece of media delivered.
11. The name of the data load file shall mirror the name of the delivery volume, and shall have a .DAT extension (e.g., ABC001.DAT).
12. The volume names shall be consecutive (e.g., ABC001, ABC002, *et seq.*).
13. If foreign language / Unicode text exists, the .DAT file shall be in UTF-8 or UTF-16 format where appropriate, consistent with this ESI Protocol.

OCR/Extracted Text Files

1. OCR or Extracted Text files shall be provided in a separate \TEXT\ directory containing Document level text files.
2. If Foreign Language/Unicode text exists, TEXT files shall be in appropriate UTF-8 or UTF-16 format.

3. IMAGES

Produce Documents in Single Page Group IV TIFF black and white files.

Image Resolution of 300 DPI.

Paper size shall be 8.5 x 11 inches unless in the reasonable judgment of the Producing Party, a particular item requires a different page size.

If a Receiving Party reasonably deems the quality of the Document produced in TIFF format to be insufficient, the Parties will meet and confer in good faith to determine whether the Producing Party must produce the Document in Native Format, or as a JPEG file, and whether such Document must be produced as a color image.

If a Receiving Party reasonably believes that a Document originally produced in black and white needs to be produced in color, it shall notify the Producing Party. The Parties agree to meet and confer in good faith concerning the re-production of such Document(s) in color either as a JPEG file or in Native Format.

File Naming Convention: Match Bates Number of the page.

Original Document orientation or corrected orientation shall be retained.

**4. ESI (AND PAPER TO THE EXTENT APPLICABLE) PRODUCTION
METADATA FIELDS**

Field Name	Description
BegBates	Beginning Bates Number.
EndBates	Ending Bates Number.
BegAttach	Beginning Bates Number of the first Document in a Document family range. Documents that are part of Document families, i.e., containing parents and attachments, should receive a value.

Field Name	Description
EndAttach	Ending Bates number of the last Document in attachment range in a Document Family range. Documents that are part of Document Families, i.e., containing parents or attachments, should receive a value.
AttachmentCount	Populated for Email parent records and indicates the number of attachments that constitute the whole family (BegAttach to EndAttach)
Custodian	Name of the Custodian of the Document Produced, to the extent reasonably and technically available.
AllCustodian	The AllCustodian field shall reference the Name(s) of all Custodian(s) who were in possession of a de-duplicated Document, to the extent reasonably and technically available.
CustodianOtherDirectory	The directory structure or path where the original file was stored on the computer for the custodians identified in the AllCustodian metadata field. The data contained in the field shall start with the identification of the other custodian followed by the source file path. This field is required only when a Producing Party de-duplicates ESI horizontally. (See Paragraph 4.2(b))
FileName	Filename of the original source ESI.
NativeLink	Path and filename to produced Native Format file (see Paragraph 5.4).
EmailSubject	Subject line extracted from an Email.
Importance	Email importance flag, to the extent reasonably and technically available
Title	Title field extracted from the Metadata of a non-Email.
Author	Author field extracted from the Metadata of a non-Email.
From	From or Sender field extracted from an Email.
To	To or Recipient field extracted from an Email.
CC	CC or Carbon Copy field extracted from an Email.

Field Name	Description
BCC	BCC or Blind Carbon Copy field extracted from an Email.
DateSent	Sent date of an Email (mm/dd/yyyy format).
TimeSent	Time of an Email (hh:mm:ss format).
DateReceived	Received date of an Email (mm/dd/yyyy format).
TimeReceived	Received time of an Email (hh:mm:ss format).
DateCreated	Creation date of a file (mm/dd/yyyy format).
TimeCreated	Creation time of a file (hh:mm:ss format).
DateLastModified	Last modification date (mm/dd/yyyy format).
TimeLastModified	Last modification time (hh:mm:ss format).
DateLastPrinted	The date the Document was last printed.
DateAccessed	The last accessed date of the Document.
File Extension	File extension of Document (.msg, .doc, .xls, etc.).
Full Text	File path to full text/OCR File.
Confidentiality	“Confidential” or “Highly Confidential,” if a Document has been so designated under any Stipulated Protective Order filed with the Court; otherwise, blank.
Message-ID	The Outlook Message ID assigned by the Outlook mail server, if applicable.
ConversationIndex	Unique alphanumeric identifier for an email conversation, which may be populated by the e-mail client for each outgoing message.
HASHValue	MD5 or SHA Hash value of the file.
FolderPath	The path to the original folder in which the Document was located.
FileSize (in bytes)	Size of the file in bytes.
PageCount	The number of pages in the file.

Field Name	Description
AttachRange	Bates Number of the first page of the parent item to the Bates Number of the last page of the last attachment “child” item.
RecordType	To indicate “Paper,” “Hard Copy,” or “HC” if a Hard Copy Document and “ESI” if it is an ESI item.
Application	Indicates software application that generated the ESI item (e.g., Outlook, Word).
Production Volume	Production volume name or number.
Redacted	User-generated field that will indicate redactions. “X,” “Y,” “Yes,” “True,” are all acceptable indicators that the Document is redacted. Otherwise, blank.
SourceParty	The Producing Party.
Chosen Time Zone	As defined in the ESI Protocol.

5. SYSTEM FILES

Common system files defined by the NIST library (<http://www.nsrl.nist.gov/>) need not be produced.